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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/743,690

12/19/2003

Shubhra Venna

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11/16/2007

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EXAMINER

TSE, YOUNG TOI

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

11/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/743,690

Applicant(s)

VENNA ET AL.

Examiner

YOUNG T. TSE

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 3 and 4, filed August 5, 2007, with respect to the rejection under 35 U.S.C. § 102(b) have been fully considered and are persuasive. The rejection of claims 1-2 and 11-12 has been withdrawn.
2. Applicant's arguments filed August 5, 2007 have been fully considered but they are not persuasive.
3. Argument: Applicants argue that claim 8 has been amended to recite that "the encoder adapts the data by separating the data into forward and conjugate pulse positions over a transmission channel."
4. Response: Claim 8 does not include the limitation that the encoder adapts the data by separating the data into forward and conjugate pulse positions over a transmission channel. Although the claims are interpreted in light of the specification, but not the measure of invention, limitations from the specification are not read into the claims for the purpose of avoiding the prior art. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Priority

5. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

6. The drawings are objected to because "M bits" from the output of "ADC" in Figure 3 should be labeled "M-bits". In Figures 4 to 6, the words "Programmable", "Downgoing", "MUX", "Conjugate", "DEMUX", and "DAC" should be labeled within a line. In Figure 5, "(monoshot" appears to be "generator" and "Conjugate pulse" should be "Conjugate pulse generator". In Figure 6, "k-bit" should be labeled "k-bits" and "k" should be labeled "k-bits". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

7. Claims 6 and 8-20 are objected to because of the following informalities: In claim 6, lines 1 and 2, the terms "thin pulses" and "relatively thicker pulse" should be "a thin pulse" and "a relatively thicker pulse", respectively. In claim 8, lines 4, 6, 13 and 14, the terms "an input", "pulse position", "into forward" and "a transmission channel" should be "input", "pulse positions", "into the forward" and "the transmission channel", respectively, wherein the dependent claims 9 and 10 depend on claim 8. In claim 11, lines 10 and 13, the terms "through a" and "the encoding includes separating" should be "through the" and "the encoder separates", respectively. In claim 15, line 3, "a transmission channel" should be "the transmission channel". In claim 17, lines 2 and 3, the terms "thin pulses" and "relatively thicker pulse" should be "thin pulses" and "relatively thicker pulse", respectively. In claim 20, line 2, "data splitter" should be "a data splitter". Wherein the dependent claims 12-14, 16 and 18-19 depend on claim 11. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the invention.

10. Claims 1-20 contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. For example, both independent claims 1 and 11 recite a communication system which corresponds to the disclosure of Figure 3 comprising a modulator, an encoder and a demodulator.

However, the specification fails to explain which elements shown in Figure 3 correspond to the modulator, the encoder and the demodulator in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Also see method claim 8. Regarding claim 18, claim 18 recites wherein the means recombines the forward and conjugate pulses into the desired digital output does not correspond to the disclosure of the present invention of Figure 3. According to the present invention, the desired digital output is the output of the receiver circuit of Figure 3. However, the means recites in claim 11 is used in the transmitter circuit of Figure 3 for transmitting mass quantities of digital data through a data transmission.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. In claim 1 (line 10), claim 2 (lines 1-2), claim 3 (lines 1-2), claim 5 (lines 2-3), claim 7 (line 2), claim 8 (lines 8-11), claim 10 (lines 1-2), claim 11 (line 12), claim 13 (lines 1-2), claim 14 (line 2), claim 15 (line 2), claim 16 (lines 2-3), claim 18 (lines 2-3) and claim 20 (line 2), the phrases "the data bits/samples", "the forward and conjugate pulses", "the input digital data bits/samples", "the encoded signal", "the pulsed data", "the data", "the desired digital output", "the received data", and "the digital input signal" all lack antecedent basis.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan et al. (WO 02/096052, hereinafter "Mohan") in view of Hartmann et al. (U.S. Publication No. 2003/0145036, hereinafter "Hartmann").

17. Regarding claim 8, As shown in figure 1, Mohan discloses a method for transmitting mass quantities of digital data through a data transmission link at high-rates of speed in a communication system including: encoding forward and conjugate pulse position over the transmission channel (118 in figure 1); encoding the pulsed data to discriminate between the forward and conjugate pulses in a signal (124 in figure 1); and demodulating the data to recombine the forward and conjugate pulses into a desired digital output (page 21, lines 3-4). Although Mohan does not explicitly show or suggest splitting the input digital data bits into a plurality of data bit sets. However, splitting the input digital data into a plurality of data sets is well known in the art as it is evident by Hartmann (page 4, paragraph [0046]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Hartmann to the teaching of Mohan in order to provide significant improvement in efficiency of modulation process in the communication system. Regarding claim 10, Mohan further teaches the forward and conjugate pulses are generated by a mono-shot pulse generator (page 20, lines 23-24).

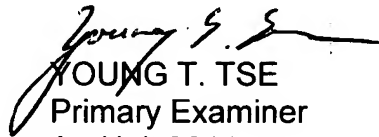
Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday-Friday.

Application/Control Number:
10/743,690
Art Unit: 2611

Page 8

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


YOUNG T. TSE
Primary Examiner
Art Unit 2611